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EXAMINER

PHAM, MICHAEL

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/673,755	Applicant(s) CHANDRA ET AL.	
	Examiner Michael D. Pham	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/29/07 and 4/9/07 has been entered.

Status of claims

2. Claims 1-7, 9-18, 20-22 are pending.
3. Claims 1 and 12 have been amended, and claims 8 and 19 have been cancelled.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1 - 7 and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watt (US Patent Application Publication 2003/0126202; hereafter Watt) further in view of Sheets et al. (US 6,819,905; hereafter Sheets).**

Claim 1:

Watt discloses the following claimed limitations:

“identifying at least one master storage image that is stored in the storage of the storage area network and that will be associated with a system user when a server is allocated to the system user;” [0046, the administrator can pick and choose from the installed software base to create a master server image. And that the repository manager can also install and manage instances of a SAN as well as on a server’s local attached storage.]

“generating a plurality of replicas of each identified master storage image prior to at least one server being allocated to the system user; and” [0046, once defined, this server image can be rapidly replicated and configured using automated tools to build out images for an entire server pool.]

“allocating a selected replica of the plurality of replicas of the master storage image to each server allocated to the system user.” [0046, once defined, this server image can be rapidly replicated and configured using automated tools to build out images for an entire server pool.]

Watt’s does not explicitly disclose “pre-configuring at least one identified master storage image with data and state information that is associated with a system user”.

On the other hand, Sheets discloses col. 15 lines 8-14, one of the significant advantages of the present invention is the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group. Sheets further discloses col. 11 lines 5-10 discloses that the engine group manager will set pointers in each of the servers for

an administrative group to an appropriate copy of the boot image software and configuration files, including operating system and application programs. That further col. 11 lines 10-14 when a reallocated server is rebooted, it's pointers have been reset by the engine group manager to point to the boot image software and configuration files for the second administrative group. Hence, administrative groups comprise images of a server and further are associated with customer accounts. Therefore, Sheets clearly discloses "pre-configuring at least one identified master storage image" (e.g. reconfiguring (e.g. pre-configuring) servers from one administrative group (e.g. image)) "with data and state information that is associated with a system user" (e.g. wipe clean all of the state associated with a particular customer account (e.g. data and state information associated with customer account) for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group.)

Both Watts and Sheets are within the same field of endeavor as the application, namely dynamic allocation of servers. Watts suggests configuring images associated with a user. Sheets suggests pre-configuring at least one identified server image with data and state information associated with a user. It would have been obvious to a person of an ordinary skill at the time the invention was made to apply Sheets disclosure of col. 15 lines 8-14, one of the significant advantages of the present invention is the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group to the system

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of Watts in order to provide the advantage of being able to keep the data separate from each user. Security is thus enhanced and the unique data can be kept separate. As disclosed in Sheets, col. 15 lines 15-17, this provides a natural and very efficient security mechanism for precluding intentional or unintentional access to data between different customer accounts.

Claim 2:

Watt does not explicitly disclose “de-allocating an allocated replica from the system user each time a server is de-allocated from the system user; and assigning the de-allocated replica to a pool of de-allocated replicas.”

However, Sheets discloses “de-allocating an allocated replica from the system user each time a server is de-allocated from the system user; and assigning the de-allocated replica to a pool of de-allocated replicas”. (See column 18, lines 32-45, discloses, another way of looking at how the present invention can dynamically provide hosted service across disparate accounts is to view a portion of the servers as being assigned to a pool of a plurality of virtual servers that may be selectively configured to access software and data for a particular administrative group. Further disclosing it automatically allocates one of the servers from the pool of virtual servers to that administrative group. Conversely, if the dispatch module determines that an agency group can relinquish one of its servers, that relinquished server would be added to the pool of virtual servers that are available for re allocation to a different administrative group.)

It would have been obvious to one with ordinary skill in the art to combine the method as disclosed in Watt with the de-allocating method as disclosed in Sheets et al. because the two both disclose methods that operate very similarly, but the de-allocation was simply not addressed in

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Watt, but is a natural extension of Watt. By moving the de-allocated replica into the pool, the server is now marked available for future use when it is needed. It is for this reason that one of ordinary skill in the art would have been motivated to include de-allocating an allocated replica from the system user each time a server is de-allocated from the system user; and assigning the de-allocated replica to a pool of de-allocated replicas.

Claim 3:

Watt does not explicitly disclose “the pool of de-allocated replicas is configured to automatically scrub all replicas in the pool of de-allocated replicas asynchronously from de-allocation the step of de-allocation.”

However, Sheets discloses “the pool of de-allocated replicas is configured to automatically scrub all replicas in the pool of de-allocated replicas asynchronously from de-allocation the step of de-allocation” (See column 15, lines 8-14, discloses one of the significant advantages of the present invention is that the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group.)

It would have been obvious to one with ordinary skill in the art to combine the method of Watt with the automatic scrub function of Sheets because of the advantage automatically clearing the unique data provides. This provides a layer of security, allowing different users to use the same equipment dynamically without having to worry about improper sharing of secret data. It is for this reason that one of ordinary skill in the art would have been motivated to have

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the pool of de-allocated replicas configured to automatically scrub all replicas in the pool of de-allocated replicas asynchronously from de-allocation the step of de-allocation.

Claim 4:

Watt does not explicitly disclose “the pool of de-allocated replicas is scrubbed when a number of de-allocated replicas assigned to the pool of de-allocated replicas equals a predetermined number.”

However, Sheets discloses “the pool of de-allocated replicas is scrubbed when a number of de-allocated replicas assigned to the pool of de-allocated replicas equals a predetermined number.” [See column 15, lines 8-14, discloses that one of the significant advantages of the present invention is that the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group.]

It would have been obvious to one with ordinary skill in the art to combine the method of Watt with the automatic scrub function of Sheets because of the advantage automatically clearing the unique data provides. This provides a layer of security, allowing different users to use the same equipment dynamically without having to worry about improper sharing of secret data. While not specifically mentioned here, the predetermined number can be considered to be one and the replica is scrubbed by reconfiguring it for use with another user's data. It is for this reason that one of ordinary skill in the art would have been motivated to have the pool of de-

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allocated replicas is scrubbed when a number of de-allocated replicas assigned to the pool of de-allocated replicas equals a predetermined number.

Claim 5:

Watt does not explicitly disclose “the pool of de-allocated replicas is automatically scrubbed by reformatting.”

However, Sheets discloses “the pool of de-allocated replicas is automatically scrubbed by reformatting.” (See column 15, lines 8-14, discloses one of the significant advantages of the present invention is that the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group.)

It would have been obvious to one with ordinary skill in the art to combine the method of Watt with the automatic scrub by reformatting function of Sheets because of the advantage automatically clearing the unique data provides. This provides a layer of security, allowing different users to use the same equipment dynamically without having to worry about improper sharing of secret data. It is for this reason that one of ordinary skill in the art would have been motivated to have the pool of de-allocated replicas is automatically scrubbed by reformatting.

Claim 6:

Watt additionally discloses “each replica is a logical volume.” (0067 discloses that the SAN routing and volume assignment can be changed by DSAP system 102 thereby affecting the

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SAN's mapping of the server's SAN connection to a SAN volume. The way the replica is referred to here makes it clear that the replicas are logical volumes.)

Claim 7:

Watt does not explicitly disclose “the system user is one of a customer and an application”. However, Sheets discloses that the system user is one of a customer and an application. (See column 15, lines 8-14, discloses one of the significant advantages of the present invention is that the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group.) It would have been obvious to one with ordinary skill in the art to combine the method of Watt with the automatic scrub by reformatting function of Sheets because of the advantage automatically clearing the unique data provides. This provides a layer of security, allowing different users to use the same equipment dynamically without having to worry about improper sharing of secret data. It is also clear that the user is referring to a customer in Sheets. It is for this reason that one of ordinary skill in the art would have been motivated to have the system user is one of a customer and an application.

Claim 12:

Watt discloses the following claimed limitations:

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“a plurality of servers coupled to a storage” [0046, repository manager is responsible for securely and efficiently provisioning and managing server images on storage devices within data centers. And figure 2 elements 212, 218, and 210.]; and

“a storage provisioning device coupled to the servers and allocating at least one server and a portion of the storage to a system user, the storage provisioning device identifying at least one master storage image that is stored in the storage and that will be associated with a system user when a server is allocated to the system user” [0046, the administrator can pick and choose from the installed software base to create a master server image. 0058, in an alternate embodiment, repository manager can also install and manage instances of a SAN as well as on a server’s local attached storage.]

“the storage provisioning device further generating a plurality of replicas of each identified master storage image prior to at least one server being allocated to the system user” [0046, once defined, this server image can be rapidly replicated and configured using automated tools to build out images for an entire server pool]; and

“allocating a selected replica of the plurality of replicas of the master storage image to each server allocated to the system user.”[0046, once defined, this server image can be rapidly replicated and configured using automated tools to build out images for an entire server pool]

Watt does not explicitly disclose “at least one master storage image being pre-configured with data and state information that is associated with a system user”.

On the other hand, Sheets discloses col. 15 lines 8-14, one of the significant advantages of the present invention is the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group. Sheets further discloses col. 11 lines 5-10 discloses that the engine group manager will set pointers in each of the servers for an administrative group to an appropriate copy of the boot image software and configuration files, including operating system and application programs. That further col. 11 lines 10-14 when a reallocated server is rebooted, it's pointers have been reset by the engine group manager to point to the boot image software and configuration files for the second administrative group. Hence, administrative groups comprise images of a server and further are associated with customer accounts. Therefore, Sheets clearly discloses "at least one master storage image being pre-configured" (e.g. reconfiguring (e.g. pre-configuring) servers from one administrative group (e.g. image)) "with data and state information that is associated with a system user" (e.g. wipe clean all of the state associated with a particular customer account (e.g. data and state information associated with customer account) for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group.)

Both Watts and Sheets are within the same field of endeavor as the application, namely dynamic allocation of servers. Watts suggests configuring images associated with a user. Sheets suggests pre-configuring at least one identified server image with data and state information

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associated with a user. It would have been obvious to a person of an ordinary skill at the time the invention was made to apply Sheets disclosure of col. 15 lines 8-14, one of the significant advantages of the present invention is the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group to the system of Watts in order to provide the advantage of being able to keep the data separate from each user. Security is thus enhanced and the unique data can be kept separate. As disclosed in Sheets, col. 15 lines 15-17, this provides a natural and very efficient security mechanism for precluding intentional or unintentional access to data between different customer accounts.

Claim 13-17:

Regarding claim 13-18, Watt in view of Sheets disclose the storage area network as cited above for claims 2-7 respectively.

6. Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watt (US Patent Application Publication 2003/0126202; hereafter Watt) further in view of Haun et al. (US 6,751,058; hereafter Haun).

Claim 9:

Watts discloses the following claimed limitations:

“identifying at least one master storage image that is stored in the storage of the storage area network and that will be associated with a system user, each master storage image including

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both a read-only data portion and a writeable data portion;” [0046, the administrator and pick and choose from the installed software base to create a master server image. and 0058, in an alternate embodiment, repository manager can also install and manage instances of a SAN as well as on a server’s local attached storage.]

“generating a read-only copy of the read-only data portion of each master storage image;” [0095, an independent instance contains an actual physical copy of all files in the master image, with the configuration files updated to provide a unique personally. The independent instance is stored on centralized storage and can be run by any available server.]

“sharing the read-only data copy of the read-only data portion of each master storage image across the plurality of servers;” [0097, the remainder of the image is shared with other dependent instances by referencing the read-only snapshot containing the original files]

“allocating the read-only copy of the read-only data portion of a selected master storage image to each server allocated to the system user; and” [0046, once defined, this server image can be rapidly replicated and configured using automated tools to build out images for an entire server pool.”]

However, Watts does not explicitly disclose, “allocating a separate writable data volume of the writable data portion of the selected master storage image to each server allocated to the system user.”

On the other hand Haun discloses column 2, lines 50-55, according to one embodiment of the present invention, a network computer (NC) system maintains a copy of the operating system

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that cannot be corrupted by ordinary users of the NC system. Further stating that the NC system may preserve user customizations, such as preferences, by maintaining individual, user, storage areas. Further disclosing, col. 1 lines 54-56, that the NC client causes information identifying the modification to be recorded on the NC server separate from the one or more system volumes in a storage associated with the NC client. And col. 2 lines 56-59, that when an NC client boots from the network and accesses a stored copy of the operating system from an NC server, the user's preferences are dynamically merged with the system environment provided to the NC client. Hence, Haun suggests "allocating a separate writable volume of the writable data portion" (e.g. modifications are separate from one or more system volumes) "of the selected master storage image to each server allocated to the system user" (e.g. user's preferences are dynamically merged with system environment provided to the NC client).

Both Watt and Haun are within the same field of endeavor, namely provisioning systems. Accordingly, both are within the same field of endeavor as Applicant's application. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply Haun's disclosure of col. 2 lines 56-59, col. 1 lines 54-56, and col. 2 lines 50-55 to the system of Watt for the purpose of maintaining individual, user storage areas. As well known and as evidence being well known, by Sheets, separating data provides a layer of security by precluding intentional or unintentional access to data between different users. It is for this reason that one of ordinary skill in the art would have been motivated to allocate a separate writable data volume of the writable data portion of the selected master storage image to each server allocated to the system user.

Claim 20:

Watts discloses the following claimed limitations:

“a plurality of servers coupled to a storage; and” [0046, repository manager is responsible for securely and efficiently provisioning and managing server images on storage devices within data centers. And figure 2 elements 212, 218, and 210.]

“a storage provisioning device coupled to the servers and allocating at least one server and a portion of the storage to a system user, the storage provisioning device identifying at least one master storage image that is stored in the storage of the storage area network and that will be associated with a system user, each master storage image including both a read-only data portion and a writeable data portion,” [0046, the administrator and pick and choose from the installed software base to create a master server image. and 0058, in an alternate embodiment, repository manager can also install and manage instances of a SAN as well as on a server’s local attached storage.]

“the storage provisioning device further generating a read-only copy of the read-only portion of each master storage image” [0095, an independent instance contains an actual physical copy of all files in the master image, with the configuration files updated to provide a unique personally. The independent instance is stored on centralized storage and can be run by any available server.]

“and sharing the read-only copy of the read-only portion of each master storage image across the plurality of servers,” [0097, the remainder of the image is shared with other dependent instances by referencing the read-only snapshot containing the original files]

“allocating the read-only copy of the read-only portion of a selected master storage image to each server allocated to the system user,” [0046, once defined, this server image can be rapidly replicated and configured using automated tools to build out images for an entire server pool.”]

However, Watts does not explicitly disclose, “allocating a separate writable data volume of the writable data portion of the selected master storage image to each server allocated to the system user.”

On the other hand Haun discloses column 2, lines 50-55, according to one embodiment of the present invention, a network computer (NC) system maintains a copy of the operating system that cannot be corrupted by ordinary users of the NC system. Further stating that the NC system may preserve user customizations, such as preferences, by maintaining individual, user, storage areas. Further disclosing, col. 1 lines 54-56, that the NC client causes information identifying the modification to be recorded on the NC server separate from the one or more system volumes in a storage associated with the NC client. And col. 2 lines 56-59, that when an NC client boots from the network and accesses a stored copy of the operating system from an NC server, the user's preferences are dynamically merged with the system environment provided to the NC client. Hence, Haun suggests “allocating a separate writable volume of the writable data portion” (e.g. modifications are separate from one or more system volumes) “of the selected master storage image to each server allocated to the system user” (e.g. user's preferences are dynamically merged with system environment provided to the NC client).

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Both Watt and Haun are within the same field of endeavor, namely provisioning systems. Accordingly, both are within the same field of endeavor as Applicant's application. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply Haun's disclosure of col. 2 lines 56-59, col. 1 lines 54-56, and col. 2 lines 50-55 to the system of Watt for the purpose of maintaining individual, user storage areas. As well known and as evidence being well known, by Sheets, separating data provides a layer of security by precluding intentional or unintentional access to data between different users. It is for this reason that one of ordinary skill in the art would have been motivated to allocate a separate writable data volume of the writable data portion of the selected master storage image to each server allocated to the system user.

7. Claims 10 – 11 and 21 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watt (US Patent Application Publication 2003/0126202; hereafter Watt) further in view of Haun et al. (US 6,751,058; hereafter Haun) and Sheets et al. (US 6,819,905; hereafter Sheets).

Claim 10:

Watt and Haun disclose a method substantially as claimed.

Watt and Haun do not explicitly disclose “de-allocating the read-only copy of the read-only data portion of the selected master image from the server to which the read-only copy was allocated when the server is de-allocated from the system user; and de-allocating the writable data volume of the writable data portion of the selected master storage image that was allocated to the de-allocated server.”

However, Sheets discloses de-allocating the read-only copy of the read-only data portion of the selected master image from the server to which the read-only copy was allocated when the server is de-allocated from the system user; and de-allocating the writable data volume of the writable data portion of the selected master storage image that was allocated to the de-allocated server. (See column 18, lines 32-45 discloses another way of looking at how the present invention can dynamically provide hosted service across disparate accounts is to view a portion of the servers as being assigned to a pool of a plurality of virtual servers that may be selectively configured to access software and data for a particular administrative group...it automatically allocates one of the servers from the pool of virtual servers to that administrative group. Conversely, if the dispatch module determines that an agency group can relinquish one of its servers, that relinquished server would be added to the pool of virtual servers that are available for re allocation to a different administrative group.)

It would have been obvious to one with ordinary skill in the art to combine the method as disclosed in Watt and Haun with the de-allocating method as disclosed in Sheets because they disclose methods that operate very similarly, but the de-allocation was simply not addressed in Watt and Haun, but is a natural extension of Watt and Haun. By moving the de-allocated copy into the pool, the server is now marked available for future use when it is needed. It is for this reason that one of ordinary skill in the art would have been motivated to include de-allocating the read-only copy of the read-only data portion of the selected master image from the server to which the read-only copy was allocated when the server is de-allocated from the system user; and de-allocating the writable data volume of the writable data portion of the selected master storage image that was allocated to the de-allocated server.

Claim 11:

Watt and Haun discloses a method substantially as claimed.

Watt and Haun do not explicitly disclose “de-allocating the writable data volume includes the steps of: assigning the de-allocated writable data volume to a pool of de-allocated writable data volumes; and scrubbing any writable data volumes assigned to the pool of de-allocated writable data volumes asynchronously from the step of de-allocating the writable data volume.”

However, Sheets suggests “de-allocating the writable data volume includes the steps of: assigning the de-allocated writable data volume to a pool of de-allocated writable data volumes; and scrubbing any writable data volumes assigned to the pool of de-allocated writable data volumes asynchronously from the step of de-allocating the writable data volume” [column 18, lines 41-45 discloses conversely, if the dispatch module determines that an agency group can relinquish one of its servers, that relinquished server would be added to the pool of virtual servers that are available for re allocation to a different administrative group. Further disclosing column 15, lines 8-14 one of the significant advantages of the present invention is that the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group.]

It would have been obvious to one with ordinary skill in the art to combine the teachings of Watt and Haun with the disclosure in Sheets by adding the scrubbing method to enhance the security of sharing the data volumes between different users. It is for this reason that one of

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ordinary skill in the art would have been motivated to have the step of de-allocating the writable data volume include the steps of: assigning the de-allocated writable data volume to a pool of de-allocated writable data volumes; and scrubbing any writable data volumes assigned to the pool of de-allocated writable data volumes asynchronously from the step of de-allocating the writable data volume.

Claim 21-22:

Regarding claim 21 and 22, Watt and Haun in view of Sheets disclose the storage area network as cited above for claims 10 and 11 respectively.

Response to Arguments

8. Applicant's arguments filed 3/29/07 have been fully considered but they are not persuasive. Applicant's have asserted the following (lettered):

A. page 9 claim 1, that if a proper motivation exists it must be provided by Sheets since Watts does not disclose "the master storage image can be pre-configured with data and state information that is associated with a system user." That the motivation simply doesn't follow.

In response the examiner respectfully disagrees that the combination of Watts and Sheets does not disclose "the master storage image can be pre-configured with data and state information that is associated with a system user". That there is no motivation to combine. And

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further the examiner disagrees with Applicant's statement that the motivation must come from Sheets.

First, the motivation must come from the references themselves (either) or in the knowledge generally available to one of ordinary skill in the art.

Secondly, as stated in the rejection above, Sheets discloses col. 15 lines 8-14, one of the significant advantages of the present invention is the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group. Sheets further discloses col. 11 lines 5-10 discloses that the engine group manager will set pointers in each of the servers for an administrative group to an appropriate copy of the boot image software and configuration files, including operating system and application programs. That further col. 11 lines 10-14 when a reallocated server is rebooted, it's pointers have been reset by the engine group manager to point to the boot image software and configuration files for the second administrative group. Hence, administrative groups comprise images of a server and further are associated with customer accounts. Accordingly, Sheets clearly discloses "pre-configuring at least one identified master storage image" (e.g. reconfiguring (pre-configuring) servers from one administrative group (image)) "with data and state information that is associated with a system user" (e.g. wipe clean all of the state associated with a particular customer account (data and state information associated with customer account) for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group.).

For clarity is submitted that while Watts discloses at least a creation of a master storage image, 0046. Sheets discloses as noted above reconfiguring an image (administrative group) with data and state information that is associated with system user (state information associated with customer account). Therefore, the combination of Watts and Sheets would suggest the claimed limitation "pre-configuring servers from the administrative group with data and state information that is associated with a system user".

*In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).*

In this case, both Watts and Sheets are within the same field of endeavor as the application, namely dynamic allocation of server. Watts suggests configuring master server images associated with a user as scene in 0046. Sheets suggests pre-configuring at least one identified server image with data and state information associated with a user as seen above. It would have been obvious to a person of an ordinary skill at the time the invention was made to apply Sheets disclosure of col. 15 lines 8-14, one of the significant advantages of the present invention is the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is

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brought into service as part of the second administrative group to the system of Watts in order to provide the advantage of being able to keep the data separate from each user. Security is thus enhanced and the unique data can be kept separate. As disclosed in Sheets, col. 15 lines 15-17, this provides a natural and very efficient security mechanism for precluding intentional or unintentional access to data between different customer accounts.

Thus, the forgoing reasons show that Watt in combination with Sheets discloses "the master storage image can be pre-configured with data and state information that is associated with a system user", and provides clear suggestion as too why one of ordinary skill would apply the teachings of Sheets.

B. page 10, claim 1, that Sheets discloses and/or suggests nothing about teaching that the master storage image is pre-configured with data and state information that is associated with a system user. That the statement Sheets et. al. discloses the master storage image is pre-configured with data and state information is associated with a system user is without basis.

In response, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Instead, the Applicant's merely re-recite the claim, and say that the references do not teach it. And that the references do not combine because it does not contain motivation since the resultant behavior would simply not follow.

In response, that the combination of Watt and Sheets do not disclose the limitation.

Please see above A.

In response, that there is no motivation and is without basis. The examiner respectfully disagrees that there is no motivation and that the combination is without basis. As it was shown above that Sheets discloses the storage image is pre-configured with data and state information that is associated with a system user, and that as stated in prior rejections that Watt disclosed a master storage image. Hence the combination of the two would suggest the claimed "pre-configuring at least one identified master storage image with data and state information that is associated with a system user". Both Watts and Sheets are within the same field of endeavor as the application, namely dynamic allocation of server. Watts suggests configuring master server images associated with a user as seen in 0046. Sheets suggests pre-configuring at least one identified server image with data and state information associated with a user as seen above. It would have been obvious to a person of an ordinary skill at the time the invention was made to apply Sheets disclosure of col. 15 lines 8-14, one of the significant advantages of the present invention is the process of reconfiguring servers from one administrative group to a second administrative group will wipe clean all of the state associated with a particular customer account for the first administrative group from the reallocated server before that server is brought into service as part of the second administrative group to the system of Watts in order to provide the advantage of being able to keep the data separate from each user. Security is thus enhanced and the unique data can be kept separate. As disclosed in Sheets, col. 15 lines 15-17, this provides a natural and very efficient security mechanism for precluding intentional or unintentional access to data between different customer accounts.

Accordingly, the combination is made with basis and provides motivation. The combination of Watt and Sheet discloses the limitation. Accordingly, Applicant's assertions

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directed towards the Watt and Sheets reference are unpersuasive. The claimed limitations, as written are thus still not patentably distinguishable enough over the cited references.

C. claim 12, that neither Watts nor Sheets discloses or suggests a storage provisioning device identifying at least one master storage image that is stored in the storage and that will be associated with a system user when a server is allocated to the system user, such that at least one master storage image is pre-configured with data and state information that is associated with a system user based on similar reasons as claim 1.

In response, arguments are similar to claim 1. Accordingly, please see response A above.

D. claim 12, similar to claim 1 there is no motivation to combine. Even if combined, the method and the device resulting from the proffered combination is simply not the claimed subject matter.

In response, arguments are similar to claim 1. Accordingly, please see response B above.

E. claim 9 and 20, that Haun discloses and/or suggests nothing about avoiding the user customizations being corrupted or needing a layer of security, but instead the examiner merely concludes that there is a separate writable area.

In response, it is respectfully submitted that avoiding user customizations being corrupted or needing a layer of security, is obvious and suggested in Haun. It is well known that

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user preferences are for a individual users and hence provides a certain level of security in that modifications are done only by the user since these are maintained individually. Further, evidence from the above rejection in claim 1 establishes this obviousness, as stated best by Sheets maintaining different customer accounts (e.g. user customizations in Haun) allows for a natural and very efficient security mechanism for precluding intentional or unintentional access to data between different customer accounts (e.g. separate individual user data in Haun). It's obvious that a user would not prefer to have preferences tampered with. Hence, a layer of security would obviously be suggested by restricting users to individual preferences. Furthermore, because user preferences are able to be modified, there is clearly a separate writable area for the system as disclosed in Haun.

F. claim 9 and 20, that there is no motivation to combine Watts and Haun. That even if the proffered combination of Watt and Huan is formed the resulting method and device are not the subject matter according to either of claims 9 and 20. Therefore, neither Watt nor Haun disclose or suggest the method comprising "allocating a separate writable data volume of the writable data portion of the selected master storage image to each server allocated to the system user."

First, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Applicant's merely state that Watt and Haun do not teach "allocating a separate writable data volume of the writable data portion of the selected master storage image to each server allocated

to the system user” without specifying why Haun would not disclose the limitation, instead Applicant’s assert that the reasoning the examiner gives simply does not follow.

In response the examiner respectfully disagrees with Applicant’s assertions that “allocating a separate writable data volume of the writable data portion of the selected master storage image to each server allocated to the system user” is not disclosed, and that there is no clear motivation to do so.

As stated in the rejection, Haun discloses column 2, lines 50-55, according to one embodiment of the present invention, a network computer (NC) system maintains a copy of the operating system that cannot be corrupted by ordinary users of the NC system. Further stating that the NC system may preserve user customizations, such as preferences, by maintaining individual, user, storage areas. Further disclosing, col. 1 lines 54-56, that the NC client causes information identifying the modification to be recorded on the NC server separate from the one or more system volumes in a storage associated with the NC client. And col. 2 lines 56-59, that when an NC client boots from the network and accesses a stored copy of the operating system from an NC server, the user’s preferences are dynamically merged with the system environment provided to the NC client. Hence, Haun suggests “allocating a separate writable volume of the writable data portion” (e.g. modifications are separate from one or more system volumes) “of the selected master storage image to each server allocated to the system user” (e.g. user’s preferences are dynamically merged with system environment provided to the NC client).

Both Watt and Haun are within the same field of endeavor, namely provisioning systems. Accordingly, both are within the same field of endeavor as Applicant’s application. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to

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apply Haun's disclosure of col. 2 lines 56-59, col. 1 lines 54-56, and col. 2 lines 50-55 to the system of Watt for the purpose of maintaining individual, user storage areas. As this is well known and as evidence being well known, by Sheets, separating data provides a layer of security by precluding intentional or unintentional access to data between different users. It is for this reason that one of ordinary skill in the art would have been motivated to allocate a separate writable data volume of the writable data portion of the selected master storage image to each server allocated to the system user.

Accordingly, there is suggestion to combine the references as they are within the same field of endeavor, and further clearly demonstrate the recited claim limitation "allocating a separate writable data volume of the writable data portion of the selected master storage image to each server allocated to the system user". The claimed limitations, as written are thus still not patentably distinguishable enough over the cited references.

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Conclusion

9. The prior art made of record listed on PTO-892 and not relied, if any, upon is considered pertinent to applicant's disclosure.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D. Pham whose telephone number is (571)272-3924. The examiner can normally be reached on Monday - Friday 9am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

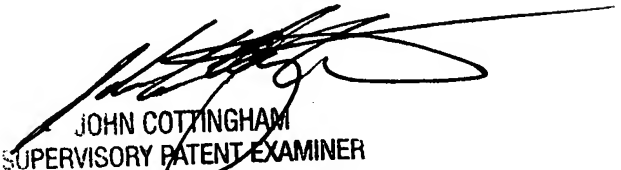
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